



## **IEEE MTT Chapter Presentation**

### **Array Synthesis Using Reflectors and Lenses**

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#### **Abstract**

Reflectors and lenses are commonly used in high gain antenna applications, where the signal intensity is the main concern. The phase properties are often neglected. Their phase properties will be discussed and a possible application for small array syntheses will be presented.

#### **Biography**

Lotfollah Shafai completed the B.Sc. degree at the University of Tehran in 1963 and M.Sc. and Ph.D. degrees in the Faculty of Applied Sciences and Engineering, University of Toronto, in 1966 and 1969, all in Electrical Engineering.

In November 1969, he joined the Department of Electrical and Computer Engineering, University of Manitoba as a Sessional Lecturer, Assistant Professor 1970, Associate Professor 1973, and Professor 1979. Since 1975, he has made special effort to link the University research to the industrial development, by assisting industries in the development of new products or establishing new technologies. To enhance the University of Manitoba contact with industry, in 1985 he assisted in establishing "The Institute for Technology Development", and was its Director until 1987, when he became the Head of the Electrical Engineering Department. His assistance to industry was instrumental in establishing an Industrial Research Chair in Applied Electromagnetics at the University of Manitoba in 1989, which he held until July 1994.

He has been a participant in nearly all Antennas and Propagation symposia and participates in the review committees. He is a member of URSI Commission B and was its chairman during 1985-88. In 1986, he established the symposium on Antenna Technology and Applied Electromagnetics, ANTEM, at the University of Manitoba that is currently held every two years.

He has been the recipient of numerous awards. In 1978, his contribution to the design of a small ground station for the Hermus satellite was selected as the 3rd Meritorious Industrial Design. In 1984, he received the Professional Engineers Merit Award and in 1985, "The Thinker" Award from Canadian Patents and Development Corporation. From the University of Manitoba, he received the "Research Awards" in 1983, 1987, and 1989, the Outreach Award in 1987 and the Sigma Xi, Senior Scientist Award in 1989. In 1990 he received the Maxwell Premium Award from IEE (London) and in 1993 and 1994 the Distinguished Achievement Awards from Corporate Higher Education Forum. In 1998 he received the Winnipeg RH Institute Foundation Medal for Excellence in Research. In 1999 and 2000 he received the University of Manitoba, Faculty Association Research Award. He is an elected Fellow of IEEE since 1987 and was elected a Fellow of The Royal Society of Canada in 1998. He was a recipient of the IEEE Third Millenium Medal in 2000 and in 2002 was elected a Fellow of The Canadian Academy of Engineering and Distinguished Professor at The University of Manitoba. He holds a Canada Research Chair in Applied Electromagnetics and is International Vice-Chair of URSI Commission B.

**DATE:** Friday July 29, 2005  
**TIME:** 2:00 pm  
**LOCATION:** DC 1302, University of Waterloo

**Invited by Professor Safavi-Naeini**